Ueunten Paul Form 4/A February 17, 2010

OMB APPROVAL UNITED STATES SECURITIES AND EXCHANGE COMMISSION OMB 3235-0287 Washington, D.C. 20549 Number: Check this box January 31, Expires: if no longer 2005 STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF subject to Estimated average **SECURITIES** Section 16. burden hours per Form 4 or response... 0.5 Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction 1(b). (Print or Type Responses) 1. Name and Address of Reporting Person * 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading **Ueunten Paul** Issuer Symbol MONOLITHIC POWER SYSTEMS (Check all applicable) INC [MPWR] (Last) (First) (Middle) 3. Date of Earliest Transaction Director 10% Owner X_ Officer (give title Other (specify (Month/Day/Year) below) below) 6409 GUADALUPE MINES ROAD 02/09/2010 Sr. V.P. Design Engineering (Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year) Applicable Line) _X_ Form filed by One Reporting Person 02/10/2010 Form filed by More than One Reporting SAN JOSE, CA 95120 Person (City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 1. Title of 2. Transaction Date 2A. Deemed 3. 4. Securities Acquired (A) 5. Amount of 7. Nature of Security (Month/Day/Year) Execution Date, if Transaction Disposed of (D) Securities Ownership Indirect (Instr. 3) Code (Instr. 3, 4 and 5) Beneficially Form: Beneficial (Month/Day/Year) Owned Direct (D) Ownership (Instr. 8) Following or Indirect (Instr. 4) Reported (A) Transaction(s) (Instr. 4) (Instr. 3 and 4) Code V Amount (D) Price Common

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

S

02/09/2010

Stock

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

SEC 1474

(9-02)

57,884

20.8921

D

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

445 (1) D

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1. Title of	2.	3. Transaction Date	3A. Deemed	4.	5.	6. Date Exerc	cisable and	7. Titl	e and	8. Price of	9. Nu
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	TransactionNumber		Expiration D	ate	Amou	nt of	Derivative	Deriv
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Under	lying	Security	Secui
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivative	e		Securi	ties	(Instr. 5)	Bene
	Derivative				Securities			(Instr.	3 and 4)		Owne
	Security	Acquired									Follo
	•				(A) or						Repo
					Disposed						Trans
					of (D)						(Instr
					(Instr. 3,						
					4, and 5)						
									Amount		
							Expiration Date		or		
								(Number		
				~	<i>(</i> 1) (5)				of		
				Code V	(A) (D)				Shares		

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Ueunten Paul

6409 GUADALUPE MINES ROAD SAN JOSE, CA 95120

Sr. V.P. Design Engineering

Signatures

By: Saria Tseng For: Paul Ueunten 02/17/2010

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Shares sold to pay tax obligations resulting from the vesting of performance units (restricted stock units) originally granted on February 8, 2008.

Remarks:

a currently valid OMB number.

This form is amended to correct the Form 4 filed on 2/10/10. Due to technical difficulties, the sales price and number of share Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays

Reporting Owners 2